

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره ۹ کلاس دوم ب

الف) $y = \sqrt{\frac{m^2 - 6m}{m^2 - m}} = \sqrt{\frac{m(m-6)}{m(m-1)(m-1)}} = \frac{1}{\sqrt{m-1}} + \frac{1}{\sqrt{m-1}} + \frac{1}{\sqrt{m-1}} + \frac{1}{\sqrt{m-1}}$ ۱۸, ۷۶

$DF = (-1, 0) \cup (0, 1) \cup [4, +\infty)$ ✓

ب) $y = \sqrt{\frac{m(m-1)(m+1)}{m(m-1)(m+1)}} \rightarrow \frac{1}{\sqrt{m-1}} + \frac{1}{\sqrt{m-1}} + \frac{1}{\sqrt{m-1}} + \frac{1}{\sqrt{m-1}}$ ✓ $DF = \mathbb{R} - \{0, +1, -1\}$

الف) $y = \frac{m+1}{\sqrt{m+|m|}} \rightarrow m+|m| > 0 \rightarrow DF = (0, +\infty)$ ✓

ب) $\frac{1}{\sqrt{m|m|}} \rightarrow m|m| > 0 \rightarrow m > 0 \rightarrow DF = (0, +\infty)$ ✓

الف) $\sqrt{2-[n]} \geq 0 \rightarrow [n] \leq 2 \rightarrow n \in \mathbb{Z} \rightarrow DF = (-\infty, 3)$ ✓

ب) $\frac{1}{\sqrt{2-[n]}}$ ✓ $\sqrt{2-[n]} \geq 0 \rightarrow [n] \leq 2 \rightarrow DF = (-\infty, 3)$

الف) $\sqrt{[m-\frac{1}{n}]} + \sqrt{[m+\frac{n}{m}]} \rightarrow [m+\frac{n}{m}-1] + [m+\frac{n}{m}] \rightarrow [m+\frac{n}{m}]-1 + [m+\frac{n}{m}] \geq 0 \rightarrow$

$2[m+\frac{n}{m}] \geq 1 \rightarrow [m+\frac{n}{m}] \geq \frac{1}{2} \rightarrow m+\frac{n}{m} \geq 1 \rightarrow m \geq \frac{1}{n} \rightarrow DF = [\frac{1}{n}, +\infty)$ ✓

ب) $[m-\frac{1}{n}] + [- (m-\frac{1}{n})] \xrightarrow{a \in \mathbb{Z}} [a] + [-a] = 0 \rightarrow m-\frac{1}{n} \in \mathbb{Z}$ ✓

$DF = \{m \mid m \in \mathbb{K} \wedge \frac{1}{n} \in \mathbb{Z}\}$

الف) $\sin m \neq 1 \rightarrow m \neq 2k\pi + \frac{\pi}{2}$ ✓ $DF = \mathbb{R} - \{2k\pi + \frac{\pi}{2}\}$

ب) $|\sin m| \neq 1 \rightarrow \sin m \neq \pm 1 \rightarrow m \neq 2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2}$ ✓

$DF = \mathbb{R} - \{2k\pi + \frac{\pi}{2}, 2k\pi + \frac{3\pi}{2}\}$ ✓

{2k\pi + \frac{\pi}{2}}

الف) $|\sin n - 1| \geq 0 \rightarrow \sin n \geq \frac{1}{n} \rightarrow n \in [k\pi + \frac{\pi}{2}, k\pi + \frac{3\pi}{2}]$
 $Df = [k\pi + \frac{\pi}{2}, k\pi + \frac{3\pi}{2}]$

ب) $\cos n \geq 1 \rightarrow \cos n = 1 \rightarrow n = 2k\pi \rightarrow Df = \{2k\pi\}$
 $(-1 \leq \cos n \leq 1)$

الف) $|m| - r > -1 \rightarrow |m| > r \rightarrow m > r$
 $|m| - r < 1 \rightarrow |m| < r \rightarrow -r < m < r$
 $\rightarrow (-r, -1) \cup (1, r)$

ب) $n + r + 1 > -1 \rightarrow (n+1)/(n+r) > 0 \rightarrow n > -r$
 $n + r + 1 < 1 \rightarrow n(r+n) < 0 \rightarrow -r < n < 0$
 $Df = (-r, -1) \cup (-1, 0)$

الف) $n - r > 0 \rightarrow n > r$
 $\log_r (n-r) \geq 0 \rightarrow \log_r (n-r) \leq r$
 $\log_r n = r \rightarrow n \leq 1$
 $(r, 1]$

ب) $n(n-1)(n+1) > 0 \rightarrow (-1, 0) \cup (1, +\infty)$

الف) $f^{m+1} \neq 0 \rightarrow Df = \mathbb{R}$

ب) $f^m - 1 \neq 0 \rightarrow m \neq 0 \rightarrow Df = \mathbb{R} - \{0\}$

ج) $f^m - r \neq 0 \rightarrow m \neq \frac{1}{r} \rightarrow Df = \mathbb{R} - \{\frac{1}{r}\}$

د) $f^m \neq r^m \rightarrow m \neq \log_r r^m \rightarrow Df = \mathbb{R} - \{\log_r r^m\}$

الف) $f_{n+1} \in W \rightarrow m = \frac{w-1}{r} \rightarrow Df = \{n \mid n = \frac{k-1}{r}, k \in W\}$

ب) $\frac{f_m - r}{f_m - 0} \in W \rightarrow$

$m = -\frac{-\delta k + r}{r k - r} \rightarrow \frac{r - \delta k}{r - rk} \rightarrow Df = \{m \mid m = \frac{\delta k - r}{rk - r}, k \in W\}$